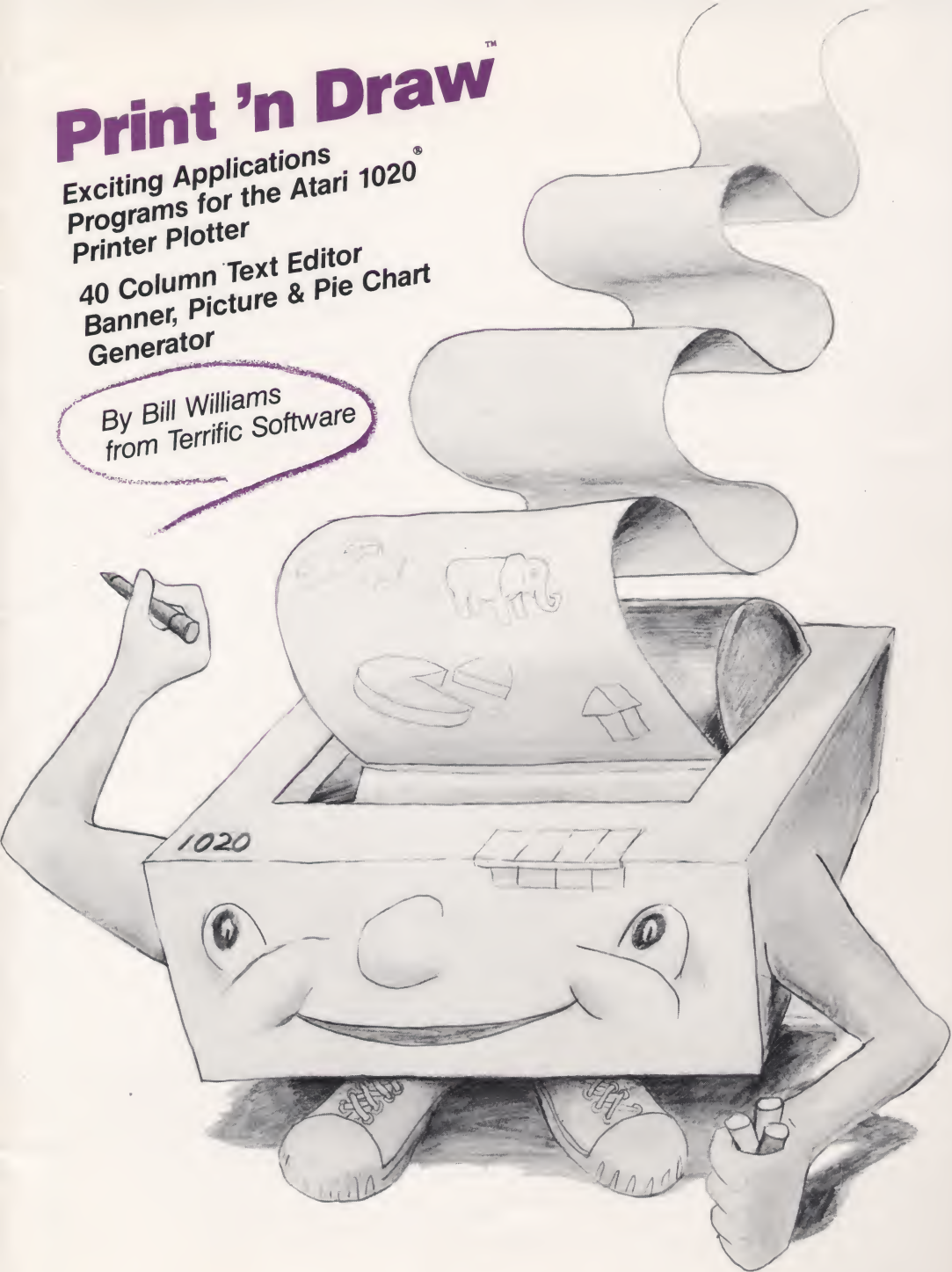


# Print 'n Draw<sup>TM</sup>

Exciting Applications  
Programs for the Atari 1020<sup>®</sup>  
Printer Plotter

40 Column Text Editor  
Banner, Picture & Pie Chart  
Generator

By Bill Williams  
from Terrific Software



# **Print 'n Draw**

## **Plotter Utilities Package**

Welcome to Print 'N Draw! Print 'N Draw is an integrated group of utilities which unleashes the graphics power of your Atari 1020™Printer/Plotter. With Print 'N Draw, you can:

- make eye-catching banners in many sizes and styles
- draw multicolor pictures created with the Graphics Magician™ by Penguin Software
- do your own multicolor, multifont typesetting (great for newsletters!)
- combine all of the above functions to create colorful postcards, greeting cards, or just have fun!

No need to worry about fancy programming and plotter codes - Print 'N Draw's menus and clearly stated questions make plotting a snap. Even without the aid of a manual, you can become Print 'N Draw-proficient in less than an hour, but rather than leave you to your own designs, we'll take you on a step by step guided tour of the utilities you'll be using most. Soooo, if you want to get the most out of your 1020 Printer/Plotter, read on!

### **Getting Started**

To get going with Print 'N Draw, place the Print 'N Draw disk in the disk drive, and turn the computer on (if you have an Atari 800™, first make sure the BASIC cartridge is properly inserted in your computer). After a few moments, you will see a title screen with Print 'N Draw's picture on it. When you're finished admiring his (or her, if you prefer) fine visage, touch any key to summon the Print 'N Draw Main Menu.

#### **Main Menu**

- [1] Make a Banner
- [2] Make a Pie Chart
- [3] Draw a Picture
- [4] Typeset a Message
- [5] Position Paper
- [6] Convert a Picture File
- [7] Quit Program

**Please enter the number corresponding to what you would like to do?**

From this menu, you will choose which of Print 'N Draw's utilities you will use. Simply enter the number corresponding to your choice at the prompt, and press RETURN. If you make a wrong entry by accident, for instance a letter or the number "9", don't worry - Print 'N Draw will always ignore a response which doesn't make sense, and ask you the question again.

To start on our guided tour of Print 'N Draw, let's begin by making a banner. At the prompt, type the number 1, and press RETURN. After a few seconds, the Banner Generator will appear.

## **Making a Banner**

After giving a brief description of its banner-making capabilities, Print 'N Draw says,

**Type:**

**Q to quit this program**

**G to go to the PLOTPIX picture drawing program first,  
(and then return back here), or**

**RETURN to continue**

If you changed your mind and don't want to make a banner, this is your only chance to quit. Typing "Q" will return you to the main Print 'N Draw menu. If you want to make a banner with pictures in it, you can draw the picture first by typing "G" (PLOTPIX is the program which is run when you choose "3" from the Main Menu). You will return to the Banner Generator upon quitting PLOTPIX. If you have decided to go ahead and make a banner, typing RETURN (actually any key except G or Q) will continue to the next screen. For now, let's forge ahead by pressing RETURN.

In the next five screens you will tell Print 'N Draw the five things it needs to know to make a banner: fontstyle, color, size, paper position, and banner message. The first screen is the font selection screen. You have a choice of ten fonts, ranging from simple Slim Line to sophisticated Stained Glass. For now, let's keep it simple, so choose Slim Line by entering the number "1" at the prompt.

Next, Print 'N Draw will ask you what color you would like your banner to be. You can print your banner in only one of the four colors available (assuming you have all four color pens in your plotter), or you can have Print 'N Draw alternate colors between letters, for a kaleidoscopic look. Choose a number between 1 and 5, and press RETURN.

Next, you will be asked what size you would like your banner to be. To help in figuring out what scale size to specify, Print 'N Draw gives you the approximate size in inches for various scale sizes. Choose a scale size, and press RETURN.

Now Print 'N Draw will ask you if you want to print your banner at the current paper position. If, for example, you have just drawn a picture, and you need to back up the paper to position the banner above the picture, you should answer "N" to this prompt (actually, you can just press RETURN. Print 'N Draw always takes RETURN as a "NO" answer to a yes or no question). Let's try our hand at positioning the paper by pressing RETURN.

Print 'N Draw uses the up and down arrow keys in combination with the Shift and Control keys to position the paper (**this screen is identical to the one you would get if you chose "[5] Position Paper" from the Main Menu**). Press the down arrow key once. Did you see the paper move? If you didn't, don't



be alarmed - one dot on the plotter is very small indeed. In fact, moving 500 dots moves the paper only four inches (try it and see!), which gives the plotter a resolution of 125 dots/inch! Print 'N Draw lets you jump forward or backward in leaps and bounds, so you can quickly get to where you're going, and then zero in on the exact spot a dot at a time if necessary.

Practice moving the paper various distances in both directions. See if you can get Print 'N Draw to return you to the same spot you started from. When you are done, press RETURN to continue with our banner-making.

At this point there is only one thing left to do - tell Print 'N Draw what the banner should say! Type your message (uppercase and lowercase are accepted), press RETURN, and watch Print 'N Draw go to work. Some of the exotic fonts take a while to print, so if you change your mind at any time, you can interrupt Print 'N Draw in mid-sentence by pressing any key (like the space bar). When the banner is aborted or finished, Print 'N Draw offers you the same options you had upon entering the Banner Generator: quitting, drawing a picture, or making another banner.

Before you quit the Banner Generator, experiment a little. Try different fonts, colors, and sizes. See which combinations work best, and which ones you particularly like. When trying out the fonts, try printing just a few letters, to get a feel for how long they take to plot. You may find that some combinations are (how shall I say it?) a little ugly, while others are quite spectacular. Don't be afraid to fool around with all of the possibilities!

When you are all finished making banners, enter "Q" at the prompt to return to the Main Menu. From here we will explore the next utility, the Pie Chart Generator.

## **Pie Charts**

Print 'N Draw's Pie Chart Generator is a great way to get a quick graphic representation of your data, whether it be something as practical as a breakdown of your monthly expenses, or something as whimsical as how many cavities you've had each year for the last five years as a percent of the total.

To enter the Pie Chart Generator, first get to the Print 'N Draw Main Menu, if you're not already there. Enter "2" at the prompt, and wait a few seconds while the program loads. As it did with the Banner Generator, the first thing Print 'N Draw does is tell what you're about to do, and give you a chance to quit should you decide not to continue. We don't want to quit just yet (at least I hope not!), so press the RETURN key and let's press on.

The first thing Print 'N Draw needs to know is if you would care to have a title for your chart - you know, something impressive like **Quarterly Sales**. Your title will appear centered above your chart, so you don't have to worry about adding leading spaces. Enter your title, if any, and Print 'N Draw will proceed to ask you for the data which will make up the chart.

For each data entry, Print 'N Draw needs to know the name of the data item, and the value, whether it be number of teeth, stock price, or what have you. Continue to enter data in this fashion until you are through, and then press RETURN at the "name" prompt.

You have one final option before Print 'N Draw draws your chart, and that is how you would like the data represented. Your choices are:

- 1) Labels only
- 2) Labels with percentages
- 3) Labels with values

If you want Print 'N Draw to calculate and display your values as percentages (to one decimal place of accuracy), you can do it by choosing "2." Once you have made your choice, kick back and relax while Print 'N Draw makes your chart. Print 'N Draw labels and draws each section in the order you entered the data. If the slice is too small to hold the label and value, Print 'N Draw will write them outside the chart and draw a line from the label to its slice. The chart itself will always fill the entire width of the paper. When the chart is done, take a minute to admire your handiwork (not bad for a beginner!). Now go back to the Main Menu by answering "N" to the "Would you like to print another chart?" prompt.

## **Pictures**

Perhaps the most fun part of Print 'N Draw is the picture drawing utility called PLOTPIX. PLOTPIX takes converted Graphics Magician™ pictures (a process we'll cover briefly later) and draws them in full four-colored splendour on the 1020 plotter. To start PLOTPIX, choose "3" from the Print 'N Draw Main Menu.

Like every other Print 'N Draw utility, the first thing you will see is a screen which describes the basic features of PLOTPIX. There are two more screens chock-full of info which follow. Now, if you find the idea of having to read through all three screens every time you use PLOTPIX to be slightly distasteful, never fear. At the end of each screen, you have the opportunity of either continuing to the next screen, skipping the rest of the screens, or quitting PLOTPIX altogether. Take the time now to read through all three screens - that way, you won't have to later!

When you are done reading the instructions, PLOTPIX checks to see if there are any picture files present on the disk. If not, it will ask you to either turn the program disk over to side B or insert your own data disk. For now, turn your program disk over, reinsert it in the drive, and hit RETURN.

PLOTPIX reads the disk directory for PLOTPIX-compatible picture files, and displays them on the screen along with a letter from A-Z. To select a picture, enter at the prompt the letter corresponding to the picture you want to draw. If you want to see what pictures are on another disk, **or** if you want to quit at this point, hit RETURN. Just so you will know what to expect, go ahead and hit RETURN. PLOTPIX asks you to confirm either the change in disks or your wish to quit. We don't want to quit, so press RETURN again, and wait till the screen is redrawn.

The Draw 'N Print disk comes filled to the brim with pictures. Pick whichever one seems interesting (my favorites are the dragon, the robot, and the Necromancer). Once you have made your choice, PLOTPIX will ask you a series of questions relating to how the picture will end up on paper.



The first and most important decision is how wide the picture will be. Just so we'll have the maximum impact, make the scale somewhere around three inches. The next three questions PLOTPIX will throw at you - rotation, mirror-imaging, and centering - don't mean all that much unless you are plotting a design (such as the border to a greeting card) which you want to be symmetrical. Unfortunately, there isn't space to go into this much more, but it's a concept which is easy enough to master with a little bit of imagination and experimentation. In any case, simply press RETURN in response to each of the three questions.

When you answer "no" to the last question about centering the picture, PLOTPIX will assume you want to position the paper yourself. If you do in fact want to position the paper, you can use the arrow and shift keys to move the paper in much the same way you did when making a banner. When you are done, hit RETURN, and PLOTPIX will promptly proceed to produce a pretty picture on the plotter paper.

Try your hand at drawing some more pictures. See which ones you like best, or which ones you think might actually be useful. If you want to draw your own pictures, read on - we'll talk about that in the next section.

## **Making Your Own Pictures with CONVERT**

Print 'N Draw must get its picture files from the Graphics Magician™ - it's as simple as that. So, if you aren't thrilled by the pictures that come on the Print 'N Draw disk, or if you are just tired of drawing bunnies and robots, you can use the Graphics Magician™ to unleash **your** creative power and make whatever picture you want. Once you have made your masterpiece, the process of converting from a Graphics Magician™ file to a Print 'N Draw file is handled by the utility called CONVERT ("6" on the Main Menu). CONVERT has complete instructions on the proper way to draw pictures with the Graphics Magician™ in such a way that they can be converted and reproduced by Print 'N Draw on the 1020 Plotter. It is **extremely important** that you read these instructions carefully **before** attempting to either draw your own Graphics Magician™ picture or convert an existing picture. Otherwise, you run the risk of not succeeding at best, and causing the program to crash at worst. Enough said? Great! Let's move on.

## **Using the Typesetter**

If you were thrilled by the creative possibilities of the Banner Generator, you'll flip over the typesetter. Using the full screen editing capabilities of the Atari computer, the typesetter lets you format short messages on a line-by-line basis with even more flexibility in styles and colors than the banner-maker.

The typesetter is jam-packed full of features, and as a result has rather lengthy instructions. When you first start the typesetting program, you have the choice of printing these instructions either on a printer or on the plotter; otherwise, they will be sent to the screen. If you have a line printer (like the Atari 825™ or Atari 1027™), the program will allow you to print the instructions on it instead of the plotter, which will

save you both time and some of your plotter ink. If you don't have a line printer, the plotter will work just fine, but be sure you don't mind waiting fifteen minutes or so; it takes a long time to print out.

While we're on the subject of slow plotting, I should warn you that some of the fancier fonts take a **long** time to print, and, if they are done too small, are hard to read. So the best thing is to do a bit of experimentation to find which combination of fonts and sizes work best for you. Have fun!

### **What's Left?**

Nothing's left! Sad to say, this ends our tour of Print 'N Draw. Although we've only briefly covered the six utilities which make up Print 'N Draw, you now have enough working knowledge of Print 'N Draw to plot up a storm. Don't stop here, though; the real fun and power of Print 'N Draw lies in its capacity as a creative tool, so go ahead and spend some time just fooling around - see what you (and Print 'N Draw!) can do!

### **Note to Basic Programmers from the Author**

This package was written in a very open-ended fashion to increase its usefulness to you, the user. Accordingly, there are no tricks played with the Break or System Reset Key, and the code is widely spread out to encourage the addition of your own custom made modules. Don't forget to get a LIST format before you make additions, to keep BASIC tidy:

```
LOAD "D:PIE"  
(insert your own disk)  
LIST "D:PIE.LST"  
NEW  
ENTER "D:PIE.LST"
```

If you want to experiment with your own fonts, I would suggest adding them to the banner generator first; the screen-editing gunk in the 40 column editor makes that program more difficult to mess with. Once you get a typestyle you like, it should then be a simple matter to figure out the changes you'll need to make for transporting to WORDPLOT.

About the style: if you must, you may cram all the statements together into huge, uglified logical lines in an attempt to improve its running speed, but you will break my heart, and you will quite likely live to regret it. Sooner or later you'll want to add some terribly obvious feature that should have been in the original code, doggone it, and you won't have any room. Please, remember your mother's advice and Be Neat.

I would also appreciate it if you did not abuse the accessibility of the code by selling copies to every Atari owner in the Northern Hemisphere. But you knew that already.

# **Print 'n Draw™**

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No need to worry about fancy programming and plotter codes - Print 'n Draw's menus and clearly stated questions make plotting a snap. Even without the aid of a manual, you can become Print 'n Draw-proficient in less than an hour. But, for those of you who enjoy "HACKING," the programs are written in a very open-ended fashion to allow you to customize them and to encourage the addition of your own modules.

**Ages 8 to Adult**

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